FRESNO, CALIFORNIA
CLASS SPECIFICATION

ELECTRICIAN

FLSA STATUS:
Non-Exempt

CLASS SUMMARY:
The Electrician is the first level in a three level Electrician series. Incumbents perform skilled work installing, altering, maintaining and repairing electrical systems, equipment and fixtures associated with, depending on area of assignment, bbuildings, facilities, fire alarms, substations, high and medium voltage switchgear and transformers, power generation equipment, street lighting systems, traffic signals and/or pump stations.

The Electrician is distinguished from the Senior Electrician, which has responsibility, as lead worker, for making work assignments, overseeing the work of other electricians, training, ordering and distributing supplies, preparing reports, and performing administrative tasks in the absence of the supervisor.

	TYPICAL CLASS ESSENTIAL DUTIES: (These duties are a representative sample; position assignments may vary.)	**FRE-QUENCY**
1.	Installs, replaces, repairs, overhauls, tests, troubleshoots, and maintains a variety of electrical systems, equipment, and fixtures.	Daily 15%
2.	Designs and calculates power and lighting systems, including power coordination studies and electrical hazard analysis (National Fire Protection Association 70E).	Daily 15%
3.	Operates a variety of light to heavy equipment required to perform electrical system installation, replacement, repair, and maintenance.	Daily 10%
4.	Follow safe work practices including confine space entry, setting up traffic (vehicular and personnel) barricades and implements traffic control to ensure safe work zones. Uses proper personal protective equipment in accordance with electrical hazard analysis program (NFPA 70E).	Daily 5%
5.	Services, repairs, and maintains lighting, power, heating, fire alarm systems, fuel dispensing systems, closed circuit television (CCTV), security systems, and automated gate systems.	Daily 5%
6.	Repairs and replaces defective parts in switchgear, motors, motor control centers, generators, pumps, storage batteries, uninterruptable power supplies switchboards, electrical panels, controllers, contactors, switches, conveyors, and/or other applicable fixtures and/or appliances.	Weekly 10%

TYPICAL CLASS ESSENTIAL DUTIES: (These duties are a representative sample; position assignments may vary.)		**FRE-QUENCY**
7.	Installs, programs, calibrates, maintains, and repairs electronic analog and digital type equipment which, depending on area of assignment, may include programmable logic controllers, variable frequency motor drives, and process instrumentation and control equipment, including fiber optic systems.	Weekly 10%
8.	Performs preventative maintenance on a variety of electrical and electronic systems, medium and high voltage (600-70,000 volts) power distribution, equipment, and fixtures.	Monthly 10%
9.	Installs conduits, wires, pull boxes, switchboards, and switches required for additions, extensions, or alterations to electrical systems.	Monthly 10%
10.	Performs other duties of a similar nature or level.	As Required

POSITION SPECIFIC RESPONSIBILITIES MIGHT INCLUDE:

Positions assigned to Streets Maintenance may be responsible for:

- Installing new street lights and traffic signal systems;
- Repairing, replacing, and maintaining traffic signal systems and controllers;
- Reviewing, testing, and correcting signal timing and traffic coordination systems.
- Inspect new construction and installation of traffic signal and street lighting systems to ensure compliance with local, State, and Federal codes and laws.

Positions assigned to the Airport may be responsible for:

- Repairing baggage conveyers;
- Locating underground utilities;
- Maintaining LED signage;
- Repairing high voltage airfield lighting, signage, jet ways, and associated electrical distribution.

Positions assigned to the Facilities Management may be responsible for:

- Installing and maintaining CCTV systems.

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Positions assigned to Wastewater/Water may be responsible for:

- Designing, installing, maintaining, overhauling, repairing and testing distribution and power generating equipment, rotating equipment, and associated digital and analog pneumatic and electrohydraulic controls, including: microprocessor-based devices and systems, utility protective relays and controls, fiber optic cables, communication and signaling systems, standby and emergency power sources, and related items.
- Performs preventative maintenance and repairs high and medium voltage (600 to 70,000 volts) substations, switchgear, transformers, power breakers, soft start and variable frequency drives, and distribution systems.
- Repair and maintain pneumatic, hydraulic, and electronic controls associated with power generation equipment such as; gas and steam turbines, reciprocating engines, gas compressors, heat exchangers, boilers, cooling towers, emission monitoring equipment, and equipment that operates at very high temperatures and pressures.

Training and Experience (positions in this class typically require):

- High School Diploma, or GED, and completion of a recognized apprenticeship program, or equivalent, and one year of journey level experience as an electrician in an industrial setting performing trouble shooting and a wide variety of electrical/electronic repairs and installation work;

OR

- An equivalent combination of education and experience sufficient to successfully perform the essential duties of the job such as those listed above.

Licensing Requirements (positions in this class typically require):
Some positions, based on assignment, may require:

- Basic Class C License
- Commercial Class B License
- Certified General Electrician

Knowledge (position requirements at entry):
Knowledge of:

- Applicable tools and equipment utilized in assigned area or responsibility;
- Electrical theory, principles and practices;
- Principles, policies, practices and operations in assigned area of responsibility;
- Local, State and National electrical codes and regulations, including PG&E Green Book;
- Solid state electronic systems, including programmable logic controllers, process instrumentation and control equipment;
- Solid state motor controllers and variable frequency drives;
- Safe work practices and procedures.

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Skills (position requirements at entry):
Skill in:

- Reading and interpreting blueprints, schematics, and other technical drawings related to job duties
- Installing, troubleshooting, repairing, and maintaining a variety of electronic equipment
- Troubleshooting and resolving electronic, analog, digital, and pneumatic type control equipment
- Safely operating and maintaining applicable tools and equipment
- Preparing, analyzing, and maintaining operational records
- Communication, interpersonal skills as applied to interaction with coworkers, supervisor, the general public, business, organizations, elected and appointed officials, media, etc. sufficient to exchange or convey information, give/receive work direction

Physical Requirements:
Positions in this class typically require: feeling, finger dexterity, grasping, hearing, repetitive motions, seeing, talking, bending, kneeling, lifting, reaching, standing, stooping, walking, balancing, climbing, crawling, crouching, pulling and pushing.

Very Heavy Work: Exerting up to 100 pounds of force occasionally, and/or in excess of 50 pounds of force frequently, and/or in excess of 20 pounds of force constantly to move objects.

Incumbents may be subjected to moving mechanical parts, electrical hazards, vibrations, fumes, odors, dusts, poor ventilation, adverse weather conditions, environmental hazards, gasses, chemicals, oils, and travel.

Note:
The above job specification is intended to represent only the key areas of responsibilities; specific position assignments will vary depending on the business needs of the department.

Classification History:
Draft prepared by Fox Lawson & Associates (LM)
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